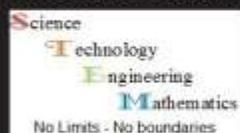


Chicago Public Schools  
Student Science Fair, Inc.

## 62nd Annual Chicago Public Schools Student Science Fair



# 2012 Organizational Handbook

**A Planning Guide for Teachers,  
School Science Fair Coordinators,  
and Area Science Fair Chairpersons**

Chicago Public Schools Student Science Fair, Inc.

Office of Science

Office of the Chief Executive Officer

Office of the Chief Education Officer

This book can be found on the following websites:

[www.cssf.org](http://www.cssf.org)

[www.cmsi.cps.k12.il.us](http://www.cmsi.cps.k12.il.us)

**In order to give proper guidance and direction to students, it is highly recommended that teachers, school science fair coordinators, and area science fair chairpersons familiarize themselves with the details and the contents of this *2012 Organizational Handbook* and the *2012 Science Fair Handbook*. The *Calendar of Events*, highlighting the major activities and corresponding deadline dates, serves as a guide for effective administration of the science fair program.**

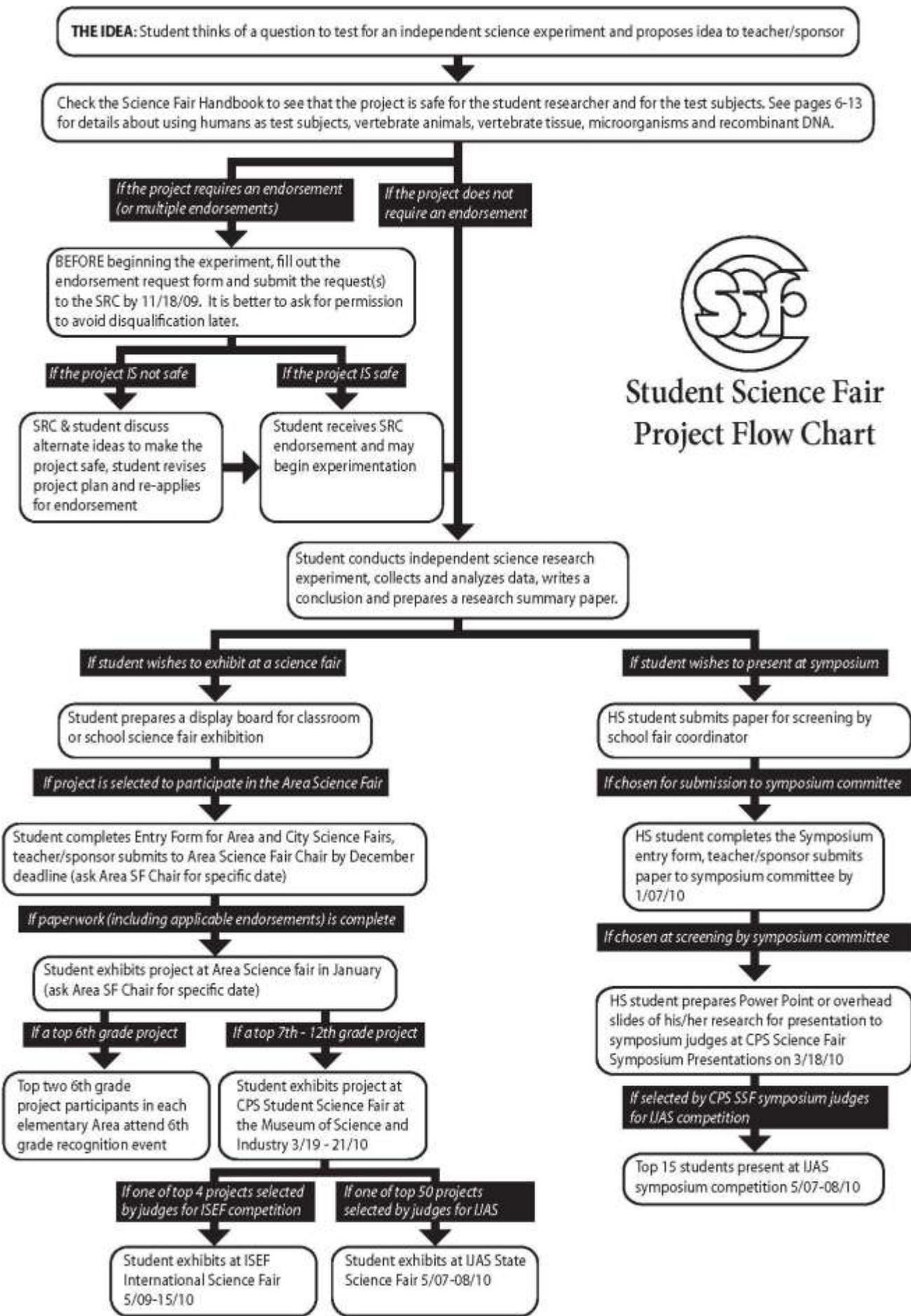
Questions concerning a specific aspect of the CPS Student Science Fair Program should be referred to the appropriate committee chairperson listed in the directory (Part Six: City Science Fair Officers and Operating Committee Chairpersons) of this handbook.

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# Student Science Fair Project Flow Chart



# Preface

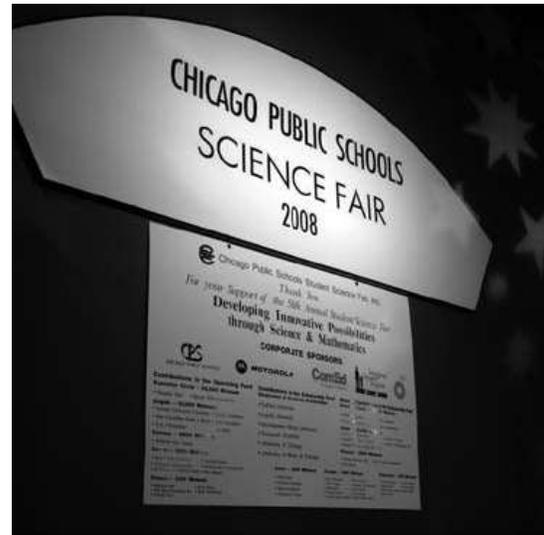
The *2012 Organizational Handbook – A Planning Guide for Classroom Teachers, School Science Fair Coordinators, and Area Science Fair Chairpersons* has been prepared to present specific information about the organizational structure, function, and operation of the science fair as an educational program. The science fair program is designed to encourage and support students who wish to extend their classroom learning experiences and become exhibitors of science projects and/or participants in the symposium/essay contests in the Chicago Public Schools Student Science Fair.

Science and mathematics curricula recommended by the Chicago Math and Science Initiative (CMSI) support inquiry-based learning. Students learn science as they seek to develop the habits of mind that characterize scientific inquiry – making observations, posing questions, designing experiments, collecting data, analyzing results, drawing conclusions, and reporting findings in both oral and written formats.

In 1950, a group of physics teachers founded the Chicago Public Schools Student Science Fair. The purpose of the fair was to serve as a vehicle to encourage independent research and to offer the opportunity for students to have their research projects evaluated by university and industrial scientists. The activities of this educational program came to the attention of the business community and the officials of the Museum of Science and Industry. As a result, technical assistance and financial support were offered, and incorporation of the organization followed. The organization was chartered in the state of Illinois as a not-for-profit corporation.

The Chicago Public Schools Student Science Fair, Inc. is financially supported by the Chicago Public Schools and two or more corporate co-sponsors. Numerous business organizations, educational institutions, and professional organizations make contributions to the operating fund and scholarship fund, and/or provide prizes and cash as special awards.

Over the years the Chicago Public Schools Student Science Fair, Inc. has diversified its operation and developed a variety of specialized programs to better serve the students of the Chicago Public Schools. Teachers and principals, together with their counterparts from the business community, serve as coordinators and chairpersons of numerous committees at various levels of activity.



# A Message to Principals

## *Your school is unique. What does Science Fair have to offer?*

A Science Fair Program can accommodate the diversity that exists among Chicago Public Schools. From schools with a vast majority of students struggling with reading and mathematics and just beginning to learn inquiry-based science, to high-performing schools, Science Fair has a place in the academic extra-curriculum program for everyone.

## *What are the benefits for students?*

Science Fair offers students an opportunity to explore their world, and build scientific knowledge and skills. All CPS students deserve the opportunity to develop the habits of mind acquired by conducting inquiry – questioning their environment, forming hypotheses, designing experiments to test hypotheses, collecting and analyzing data, and sharing the results with other students. For many students, the additional after-school endeavor provides an exciting alternative to sports and playground games that can be both emotionally and academically fulfilling.

Before a student can form a hypothesis or design an experiment, library research must be done. This is an example of how Science Fair connects with the **Chicago Reading Initiative** and the **Reading Instruction Framework**. Students read various sources for specific types of information which enables them to better *comprehend* a science topic of interest. As they read, students acquire new science *vocabulary* and develop a deeper understanding as they build on prior knowledge. Over the course of developing a science fair project, *fluency* in reading advanced materials is improved. And, of course, the primary mechanism of science fair is communication, so students will receive experience *writing* and orally presenting scientific information.

Independent research (the prelude to a science fair project) is enhanced by the challenge of competition. It is an observable consequence that competition breeds champions. Science Fair encourages students to strive for their personal best by providing a venue for students to share their efforts, discoveries, creations, and inventions with others and compare the outcome of their research among other students.

This sharing is validated by scientists, researchers, and other science, mathematics, or computer science career personnel who serve as judges. Constructive feedback from judges reassures students that they are on the right track; it helps them to look at their findings in a different perspective; it corrects misconceptions; and it stimulates them to continue researching. Science fair presents a wonderful opportunity to invite community members into your school and provide concentrated, academic support. It's a great vehicle to foster and crystallize relationships with parents, business leaders, and other community members.

Every student in every school has an equal opportunity to participate. As the science fair competition advances from the classroom level – to the school fair – to the area fair – to the city fair – to the state fair – and finally to the International Fair - better and better student performance is recognized. The research endeavors at the International Fair come from the very top projects at our Chicago city science fair; the projects at the Illinois state fair comes from the best at our Chicago city fair; the exhibits at the city fair come from the best from Area fairs; the projects at Area fairs come from the best at the school science fairs; and the exhibits at the school fair come from students presenting the best work in their classrooms.

## ***What are the benefits for teachers?***

Science teaching instruction that is inquiry-based promotes more meaningful content for students. Instruction is enriched when teachers allow students to select a science topic for conducting research – giving each student time to explore a personal fascination. Teachers can exercise their understanding of student development and learning by guiding student research. They come to realize that as each student conducts independent research, each student has an opportunity to individually grow, develop and learn. The additional time working on science and literacy skills after-school can only help with students' in-classroom academic achievement.

Science fair projects are conducted over time and in various stages. Therefore, both formative and summative assessment strategies can be used to provide constructive feedback to students as well as serve as an authentic assessment of a student's attainment of the Illinois Learning Standards in English, science, mathematics, and fine arts.

The planning of a school science fair enables teachers to work on teams and build collaborative relationships with colleagues, community members, and parents/guardians. The entire school and community share in the pursuit of students' academic achievement. Teachers can implement effective instruction across an integrated curriculum. English teachers can help students develop their scientific writing skills; teachers of mathematics can help students use appropriate measurement skills in their science experiments and analyze data; social studies teachers can expose students to societal issues appropriate for scientific investigation; and art teachers can help students with composition and design of a science fair display board. As principal, a school science fair presents a tremendous organizing opportunity to enhance the communication and collaboration with the science department and between all faculty members at your school.

## ***What are the benefits for schools?***

In addition to individual benefits for students and teachers, there are collective benefits for the entire school when students conduct science fair research. The school builds partnerships with community businesses, organizations, and other entities to enhance student learning and highlight academic successes. Resources in the community can be used to extend student learning. An open-forum of communication between the school and the entire community can continually share the good news of what is happening in the school. Curriculum adaptations to the changing needs of society become apparent at a faster pace. Stakeholders in the community are able to feel empowered to affect change and experience a greater sense of responsibility for the success of community schools. Schools are able to exhibit the exceptional talents of their students and have a means of comparing their level of success with other schools.

# Part One: Science fair Objectives and Standards

## Objectives of Independent Research and Development of Science Fair Projects

At the classroom and school levels, assigning students to conduct long-term independent science research that could be developed into science fair projects meets the following objectives:

- Apply and extend classroom learning
- Connect classroom learning with the science world and everyday life
- Pursue individual scientific interests
- Develop science research skills
- Construct graphs, charts, and informative display boards
- Practice and develop knowledge and skills associated with Illinois Learning Standards in English Language Arts, Mathematics, Science, and Fine Arts
- Provide opportunities for interdisciplinary skill development
- Reinforce the Chicago Reading Initiative goals
- Encourage and support student work over time – from one school year to the next – throughout their public school experience
- Provide experience in peer evaluation and peer coaching
- Develop oral and written communication skills
- Enable students to appreciate the scientific work of their classmates

The School, Area, and City Science Fairs support the following objectives:

- Allow students to share research findings with other students from their school and with students from other area and city schools
- Showcase the outstanding research skills of students within the school, area, and city
- Provide an opportunity for community resource persons to serve as judges and mentors

## Illinois Learning Goals and Standards Related to Science Fair

The development of a science fair project serves as an authentic assessment of a student's attainment of the Illinois Learning Standards. These standards are important because scientific reading is essential. It is the method by which students acquire information and ideas from books, journals, magazines, newspapers, manuals, letters, and other sources of information. Students who read a wide variety of scientific material build a strong foundation for learning in all areas of science and of life.

The ability to write clearly is essential to students' effective communication about his or her research efforts. Students with high-level writing skills can produce a research summary, symposium paper, or essay that reflects planning and organization and effectively conveys the results of their research findings.

Good listening and speaking skills are essential in exchanging ideas with teachers, parents, mentors, other students, and judges. Effective oral communication is a necessity in presenting a science fair project and is recognized as a fundamental indicator of a student's knowledge and credibility.

Measurement skill is an indispensable part of scientific research. All students must be able to choose an appropriate level of accuracy for measurement, select what measuring instruments to use, and correctly determine measures of objects, space, and time.

Students must be able to organize data, make sense of variables and patterns, and judge the reasonableness of any claims and interpretations made as a result of their experimentation. All students need to understand the role probability plays in data collection and apply it in decision making.

Independent research and the inquiry process prepare students to explore science and apply methods of technological design. This process enables students to pose questions, carry out library research, make predictions, gather and work with data, use appropriate measurement techniques, analyze data, draw conclusions based on evidence, communicate their methods and results, and think about the implications of scientific research and problem solving.

Students use the sensory elements, organizational principles, and expressive qualities of the arts when they construct a display board to represent their research findings. Appropriate use of these elements can be organized to convey visual representation and meaning of research findings.

The development of a science fair project provides an opportunity for interdisciplinary connections among English language arts, mathematics, science, and fine arts learning standards. The specific Illinois Learning Goals and Standards that relate to science fair are listed below.

## English Language Arts Goals

- Goal 1: Read with understanding and fluency.
- A. Apply word analysis and vocabulary skills to comprehend selections.
  - B. Apply reading strategies to improve understanding and fluency.
  - C. Comprehend a broad range of reading materials.
- Goal 3: Write to communicate for a variety of purposes.
- A. Use correct grammar, spelling, punctuation, capitalization, and structure.
  - B. Compose well-organized and coherent writing for specific purposes and audiences.
  - C. Communicate ideas in writing to accomplish a variety of purposes.
- Goal 4: Listen and speak effectively in a variety of situations.
- A. Listen effectively in formal and informal situations.
  - B. Speak effectively using language appropriate to the situation and audience.
- Goal 5: Use the Language Arts to acquire, assess and communicate information.
- A. Locate, organize, and use information from various sources to answer questions, solve problems, and communicate ideas.
  - B. Apply acquired information, concepts, and ideas to communicate in a variety of formats.

## Mathematics Goals

- Goal 7: Estimate, make, and use measurements of objects, quantities, and relationships and determine acceptable levels of accuracy.
- A. Measure and compare quantities using appropriate units, instruments, and methods.
  - B. Estimate measurements and determine acceptable levels of accuracy.
  - C. Select and use appropriate technology, instruments, and formulas to solve problems, interpret results, and communicate findings.
- Goal 8: Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems, and predict results.
- A. Describe numerical relationships using variables and patterns.
  - B. Interpret and describe numerical relationships using tables, graphs, and symbols.
  - C. Solve problems using systems of numbers and their properties.
  - D. Use algebraic concepts and procedures to represent and solve problems.
- Goal 10: Collect, organize, and analyze data using statistical methods; predict results; and interpret uncertainty using concepts of probability.
- A. Organize, describe, and make predictions from existing data.
  - B. Formulate questions, design data collection methods, gather and analyze data, and communicate findings.
  - C. Determine, describe, and apply the probabilities of events.

## Science Goals

- Goal 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments, and solve problems.
- A. Know and apply the concepts, principles, and processes of scientific inquiry.
  - B. Know and apply the concepts, principles, and processes of technological design.
- Goal 12: Understand the fundamental concepts, principles, and interconnections of life, physical, and earth/space sciences.
- A. Know and apply concepts that explain how living things function, adapt, and change.
  - B. Know and apply concepts that describe how living things interact with each other and with their environment.

- C. Know and apply concepts that describe properties of matter and energy and the interactions between them.
- D. Know and apply concepts that describe force and motion and the principles that explain them.
- E. Know and apply concepts that describe the features and processes of the Earth and its resources.
- F. Know and apply concepts that explain the composition and structure of the universe and Earth's place in it.

Goal 13: Understand the relationships among science, technology, and society in historical and contemporary contexts.

- A. Know and apply the accepted practices of science.
- B. Know and apply concepts that describe the interactions among science, technology and society.

## **Fine Arts Goal**

Goal 25: Know the language of the arts.

- A. Understand the sensory elements, organizational principles, and expressive qualities of the arts.

Example benchmark: 25.A.3e

Analyze how the elements and principles can be organized to convey meaning through a variety of media and technology.

The Illinois Learning Standards were taken from the Illinois State Board of Education Website: <http://www.isbe.net/ils>. Teachers are encouraged to visit this Website for details about the benchmarks and performance descriptors.

# Illinois Professional Teaching Standards

Teaching by inquiry and guiding the development of students' independent research skills enables science teachers to practice and develop the professional teaching standards listed below.

<b>Standard</b>	<b>Description</b>
<b>1. Content Knowledge</b>	The teacher understands the central concepts, methods of inquiry, and structures of the discipline(s) and creates learning experiences that make the content meaningful to all students.
<b>2. Human Development and Learning</b>	The teacher understands how individuals grow, develop, and learn and provides learning opportunities that support the intellectual, social, and personal development of all students.
<b>3. Diversity</b>	The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.
<b>4. Planning for Instruction</b>	The teacher understands instructional planning and designs instruction based upon knowledge of the discipline, students, the community, and curriculum goals.
<b>5. Learning Environment</b>	The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
<b>6. Instructional Delivery</b>	The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.
<b>7. Communication</b>	The teacher uses knowledge of effective written, verbal, and visual communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
<b>8. Assessment</b>	The teacher understands various formal and informal assessment strategies and uses them to support the continuous development of all students.
<b>9. Collaborative Relationships</b>	The teacher understands the role of the community in education and develops and maintains collaborative relationships with colleagues, parents/guardians, and the community to support student learning and well-being.
<b>10. Reflection and Professional Growth</b>	The teacher is a reflective practitioner who continually evaluates how choices and actions affect students, parents, and other professionals in the learning community and actively seeks opportunities to grow professionally.
<b>11. Professional Conduct</b>	The teacher understands education as a profession, maintains standards of professional conduct, and provides leadership to improve student learning and well-being.

Taken from *Content-Area Standards for Educators*, Illinois State Board of Education, Division of Professional Preparation, January 2001

# Part Two: Scope of City Science Fair Programs

## Responsibilities of the City Science Fair Council

The City Science Fair Council is composed of Area Science Fair Chairpersons approved by the Area Instruction Officers (AIOs) within each Area of the Chicago Public Schools, the Executive Committee of the City Science Fair, and the chairpersons of the City Science Fair Operating Committees. The general duty of the Area science fair chairpersons is to coordinate the activities of the preliminary Area fairs leading up to the City Science Fair at the Museum of Science and Industry. A Chairperson presides over the council for a term of two years.

Specific duties and responsibilities of the City Science Fair Council are to:

- Conduct the annual Chicago Public Schools Student Science Fair, the Student Science Symposium, the Essay Contests, the ComEd High School Science Club Program, the Research Grant Program, the Advise-a-Student Program, and the annual Scholarship Program.
- Maintain communication with the Chief Education Officer of the Chicago Public Schools, the corporate sponsors for the current school year, and the Museum of Science and Industry.

Recommendations of the City Science Fair Council are submitted to the Chairperson for policy decisions affecting the operation of the activities of the corporation.

A Board of Directors, representing the business, industry, and academic community; the school district administration; and the Museum of Science and Industry work with the Executive Committee to develop policy and to raise funds for the activities of the Student Science Fair.

## Research Grant Program

The purpose of the *Research Grant Program* is to financially assist students beyond the resources of their classroom teachers and their schools. Additional information about the *Research Grant Program* and the applications for both the *Mini* and *Maxi Research Grants* are found in the *2012 Science Fair Handbook*. Suggested submission dates and the final due date are announced on the *Calendar of Events* at the back of this handbook.

The *Mini Research Grant Program* allows students to apply for research grants not to exceed \$100 per semester. Students may apply for and receive a maximum of two grants, not to exceed \$200 per school year.

The *Maxi Research Grant Program* allows students to apply for a one-time-only cash grant of up to \$500. A detailed proposal must be submitted for consideration to the Research Grant Committee. If the student's application passes the initial screening, he/she must present his/her proposal in person to the Research Grant Committee.

Funds are awarded directly to the student, not to the school. Research funds are for the purchase of materials that are consumable or are not normally available in the school. The student is responsible for keeping a careful record of expenditures. The student is also responsible for forwarding receipts and a written report to the Research Grant Committee Chairperson. All non-consumable, serviceable materials must be returned to the student's school upon completion of the research project. Applications for the research grants are found in the *Appendix* of the *2012 Science Fair Handbook*.

## Advise-A-Student Program

The *Advise-A-Student Program* is designed to provide expert help from professionals at universities and in industry. Students who have started a project, completed preliminary library research, and exhausted the expertise of local personnel for assistance may apply for the assistance of an advisor in their field of research. The job of the advisor is to answer questions and make suggestions regarding the student's research. The advisor is not expected to provide equipment, supplies, or laboratory facilities.

Students are permitted to apply for an advisor only after they have decided on a project and have done the library research. A copy of the Advise-A-Student Program Advisor Request Application is found in the *Appendix* of the *2012 Science Fair Handbook*.

## Symposium Program

Grades 9–12 high school students' research papers, processed through the high school science fair coordinator and accepted by the City Symposium Committee, are presented by the selected students on Thursday of the week of the City Science Fair. Each high school is allowed to submit a maximum of 30 symposium papers. The total of 30 papers includes both symposium papers and essay papers. The deadline for submitting an essay or symposium paper is **Thursday, January 5, 2012**. This deadline for submission of papers is firm and will not be extended.

## State Essay Contest

Students in Grades 7 through 12 may compete with a library research paper in the "Essay Only" segment of the Illinois Junior Academy of Science (IJAS) Paper Session Competition. The topics for the 2008 Essay contest are: (1) The IJAS Student Essay. The topics for the 2012 Essay contest are found at [www.cpsssf.org](http://www.cpsssf.org).

## Chicago BP Essay Contest

This is a Chicago-based competition (in two divisions) sponsored by BP America, Inc. and an opportunity for Chicago Public School students to win monetary prizes for writing exceptional essays. The Elementary Division is for students in grades 7 & 8. The High School Division is for students in grades 9 - 12. The due date for all essays is **January 5, 2012**. See the *2012 Science Fair Handbook* for additional information about the essay entry procedures, official entry form, essay cover sheet, and essay checklist.

## City Science Fair

Winning projects selected at the Area science fairs are exhibited at the Museum of Science and Industry during a three-day fair.

Each exhibitor at the City Science Fair must be currently enrolled in a Grades 7-12 Chicago public school. Seventh- or eighth-grade students may have one partner with their exhibit. High school students may not have a partner.

Approximately 300 exhibits from all the Instructional Areas of the Chicago Public Schools are evaluated by university and industrial judges. Awards given are *Gold*, *Silver*, and *Bronze*. Many companies and organizations present special awards and tours to selected students. A separate group of judges makes these selections based upon their own criteria.

Four students are chosen to represent the Chicago Public Schools at the International Science and Engineering Fair (ISEF). Approximately 65 students are selected to participate in the exposition and paper sessions at the Illinois Junior Academy of Science (IJAS) on the campus of the University of Illinois in Champaign-Urbana. Participants in this state science fair must meet any and all requirements determined by the IJAS rules. International Science and Engineering Fair (ISEF) participants are bound by all published ISEF rules.

## College Scholarships for Graduating Seniors

Seniors who are prospective graduates of Chicago public high schools and who are participating in or who have participated in Chicago Public Schools Student Science Fair activities at the area/regional or city level are eligible to apply for scholarships. Science fair activities include exhibit of projects, symposium presentations, and/or submissions to the essay contests. Students who meet these initial criteria are urged to file an application for a scholarship. To qualify for a scholarship, a candidate must submit to the Scholarship Committee, by the deadline date of **April 8, 2012**, a completed application with supporting documents. The scholarship application is found in the *Appendix* of the *2012 Science Fair Handbook*. Scholarship applications are sent to current seniors who participated in the previous year's City Science Fair. Students should seek the assistance of their high school counselors in the processing of the application.

The Scholarship Committee, representing the business and education communities, screens all applications and chooses a number of students for interviews. After these interviews, the committee

selects the scholarship recipients on the basis of the following:

- Amount of science fair participation and levels of achievement
- Academic profile: types of courses and grades, class rank, and standardized test results
- Career objectives
- Extracurricular (school and community) activities
- Personal and leadership characteristics
- Letters of recommendations
- Written personal essay

Some monetary, college, and university scholarships are awarded directly to the student. Near the end of the school year, education and business leaders present the scholarships at an awards reception.

A list of university scholarships made available to Chicago Public Schools Student Science Fair, Inc. for seniors graduating from Chicago public high schools in in June of this school year appears in the *20120 Science Fair Handbook*.

# Part Three: Classroom Science Fairs

## Local School Evaluation

The *2012 Science Fair Handbook* is the key source of guidelines and directions for students interested in doing research. The principal, the school science fair coordinator, and classroom teachers determine the methods used in directing student investigations and in selecting these students to enter an Area science fair. It is recommended that the school science fair serve as a community building event and persons with a science and/or mathematics background be selected to judge local school projects. The guidelines for judging provided in the *2012 Science Fair Handbook* should be used as the criteria for selecting students to represent the local school at the area science fair. Projects that show evidence of independent research (not demonstrations) should be selected for the area science fair.

The trend in recent years has been to budget time in favor of working with interested students to develop meaningful research projects rather than in requiring all students to generate projects for a large school exhibition.

Students at the high school level are given the opportunity to submit their scientific research papers directly to the City Symposium Committee. Participation in the Symposium is not contingent upon the entry of an exhibit, but the project must include primary research conducted by the student. The research paper requirements are identical in both the project competition and the Symposium. The difference is that students in the Symposium make their presentation to a panel of judges without the advantage of a display.

## Vertical Planning

Coherence is a driving factor in the Chicago Math & Science Initiative, and instructional coherence plays a pivotal role in designing middle-school and high-school science programs. A high-functioning science program has a complete storyline from grade to grade, so that the science a student learns, say, as a freshman, is the foundation for his or her sophomore, junior, and senior years. The involvement of students in the Science Fair Program should play a central role in their overall development.

Students who are successful in science fair generally work on their projects for several years, refining their experimental methods and honing their arguments. [See information about external university partners.] Schools with strong science fair programs have a clear plan that is sequential and cumulative for each semester of a student's science fair career. This work is often called "vertical teaming," as teams form vertically within the school's science department to ensure coordination from year to year.

One area that is particularly important to science fair is fostering students' ability to design and conduct experiments. Over the course of their educational experience at a school, students should progressively design and conduct more complicated and more elaborate experiments. In some cases, this means adding new techniques or tools—for instance, many students learn about uncertainty analysis for the first time in a junior- or senior-level physics class.

In other cases, this means gradually removing the intellectual "scaffolding" that surrounds laboratory investigations—moving from more structured laboratories and procedures in the beginning to more open-ended research as the student becomes more proficient. Science departments should discuss and establish concrete plans within all science courses to ensure that students develop their ability to design and conduct experiments each year.

Another area that is important to science fair is teaching students how to communicate scientific information. Building on the work of the Chicago Reading Initiative, this can involve teaching students such basic skills as how to make their scientific arguments verbally, graphically, and in a variety of written formats to much more sophisticated skills such as refining their ability to create arguments and tradeoffs based on evidence. Science departments should discuss and establish plans within all science courses so that, year after year, students have the opportunity to communicate scientific information to a variety of audiences and in a variety of formats.

## Responsibilities of the Classroom Science Teacher

- Instill in students an interest in research and indicate the intrinsic values that can be derived from independent investigations.
- Explain and reinforce that Science Fair, the Science Symposium, and the Essay Contests present opportunities for further student independent study.
- Explain that the sharing of ideas with other students and leading scientists at school, area, city, and international levels is the cornerstone of these programs.
- Assist students in selecting and developing ideas for research projects and/or scientific papers. Where possible, make available resource information in the form of books, periodicals, and physical equipment.
- Discuss with students how to develop a project and show results of past research projects.
- Distribute a *2012 Science Fair Handbook* to those who show promise.
- Assist students with research grant applications and *Advise-A-Student* applications when projects meet the criteria.
- Arrange periodic small-group discussions on progress of projects and provide opportunities to analyze and solve problems related to individual projects.
- Help students obtain and share equipment and supplies.
- Determine that each project meets the safety requirements as outlined in the *2012 Science Fair Handbook*

# Suggested Calendar

## September

- Send a letter to parents/guardians describing the kinds of learning activities scheduled for the school year. Inform them that students will be assigned a long-term independent science investigation that will take approximately six weeks to complete. Indicate how progress will be monitored and provide guidance during this period of time.
- Discuss safety guidelines involved in conducting experimentation. Display posters depicting safety rules and regulations. Make the practice of appropriate safety procedures an integral part of daily classes involving activities with manipulatives and equipment used for experimentation.
- Use the inquiry approach in daily science lessons. Provide various opportunities for students to conduct short-term science investigations in class and as homework assignments.
- Have students write lab reports to show evidence of knowledge gained from daily/weekly experimentation. Provide a handout listing the parts of a lab report.
- Connect independent research assignments to the practice and development of Illinois Learning Standards in English Language Arts, Mathematics, Science, and the Fine Arts.
- Connect independent research assignments with the Chicago Reading Initiative Reading - Instruction Framework components.
- Display science fair project boards completed by students in the past at a *Parent Night* event or have a sample project board on display.
- Collect resource materials that can be used by students to generate ideas.
- Plan to attend a science fair workshop sponsored by Chicago State University, Northeastern Illinois University, or the CPS Student Science Fair, Inc.
- Assist with the planning of the school science fair.
- Provide the names of potential judges for the school fair.

## October

- Distribute information to students about the Essay Contests topics and guidelines for writing an essay. Indicate when the first draft of the essay is due and when the final essay is due.
- Provide students with a timeline for completing the long-term research assignment. A typical six-week plan follows:
  - Week 1: Introduce the long-term independent science assignment. Have students select a topic and begin library research. (Library research should continue throughout the six weeks and beyond if a student is selected to participate in the school, area, city, state, or international fairs.)
  - Week 2: Survey students to determine who will need to apply for special endorsements. Have students write a purpose and hypothesis, design an experiment to test the hypothesis, and list materials needed. Review safety guidelines for experimentation.
  - Week 3: Instruct students to obtain materials needed to conduct their experiments. (Help students apply for a research grant if appropriate.) Have students begin experimenting and instruct them to maintain careful and complete records of observations and data collected. Suggest that students keep all data in a bound notebook or journal. Encourage students to take pictures during the various stages of development. (Pictures will serve as evidence of equipment and materials used in the experiment, as well as verify changes over time.)
  - Week 4: Have students continue conducting experiments, consulting with mentors and other persons who are providing guidance, collecting data, taking pictures, collecting library references, and thinking about observations made.
  - Week 5: Have students analyze data, construct graphs, draw conclusions, and write the research summary.

## November

- Week 6: Review with students the guidelines and restrictions that must be followed when creating a display board. Instruct students to prepare a display board of results with tables, graphs, and pictures. (Have recycled display boards available for students to use – just to present their research findings to the class. If the materials are stapled to the display board, they can easily be removed for use by another student.) Have students prepare and practice an

oral report of research findings.

- Organize a schedule allowing each student 5 minutes to give an oral presentation of his/her independent science investigation to the science class.
- Prepare a rubric for evaluating the oral presentation and the display board.
- Discuss how students will engage in peer evaluation of each classmate's oral presentation and display board.
- Establish a procedure to select the best projects for participation in the school science fair.
- Send a notice to parents/guardians indicating the date, time, and location of the school science fair.
- Work with students who have been selected to participate in the school science fair. Determine if these students need to apply for a science fair *Mini* or *Maxi Research Grant*; submit an application to the *Advise-A-Student Program*; request a human, non-human vertebrate, human or vertebrate animal tissue, microbiology, or recombinant DNA endorsement.

## December

- Review student symposium papers and essays. Make arrangements for submission to the City Symposium Committee.
- Provide an opportunity for those students selected to participate in the school science fair to practice their oral presentation in front of a class. Encourage listeners to give constructive feedback for improvements.
- Encourage all students to continue working on their independent research projects. Work with students who express an interest in preparing for next year's science fair.
- Assist with the operation of the school science fair.
- Take science classes to visit the school science fair.
- Assist students attending the Area fair with proper completion of required documents, i.e., *2012 Student Science Fair Official Entry Form for Area* and *City Science Fairs, Abstract, Safety Sheet, Research Summary*, and any applicable endorsements.

## January

- Review the *Research Summary* written by students who have been selected to represent the school at the Area science fair. Provide suggestions for improvements.
- Encourage students advancing to the Area science fair to continue performing experiments and collecting data. Also, suggest that these students continue to locate information for the *Review of Literature* section of the *Research Summary*.
- Send information to the parents of those students selected to participate in the Area science fair about the date, time, and location of the Area fair. Inform parents that they will need to arrange transportation for these students. Seek the assistance of the administrative staff in solving transportation problems.
- Visit the Area science fair. Talk with students from various schools about their projects. Offer encouragement to all students. Take pictures of project display boards as examples of layout and design.
- Assist graduating seniors who qualify with the scholarship application. See the *2012 Science Fair Handbook* for details.

## February

- Assist students with completing and submitting a *Mini* or *Maxi Research Grant application*.
- Provide suggestions for project improvement to students who are advancing to the City Science Fair.
- Review the *2012 Exhibitor Bulletin* with students selected to attend the City Science Fair. Work with students to complete required documents, i.e., *Abstract, Safety Sheet, Research Summary*, and any applicable endorsement(s).
- Send a notice to parents/guardians explaining the project setup procedures and schedule for the City Science Fair.

- Encourage all students to visit the City Science Fair held at the Museum of Science and Industry. The fair is open to the public on Saturday and Sunday of the Science Fair Week. Check the dates and times listed in the *Calendar of Events* at the back of this handbook.

## March

- Make and confirm arrangements with students and their parents/guardians for transportation and setup of projects at the City Science Fair.
- Review all required documentation for students attending the City Science Fair. Sign the appropriate documents, i.e., *Safety Sheet*, and *Title Page* of the *Research Summary*.
- Assist student exhibitors with making the required nine copies of the entire research document.
- Assist student exhibitors with the final development of their project display board. Check the dimensions allowed for project boards described in the *2012 Science Fair Handbook*.
- Notify other teachers of students participating in the City Science Fair that these students will need to leave school to set up their projects at the Museum of Science and Industry. Also announce that the students will exhibit their projects from Friday to Sunday of the Science Fair Week. Refer to the *Calendar of Events* printed in the back of this handbook for specific dates and times.
- Attend the City Science Fair. Visit with students from your school and listen to the oral presentation of different students, asking appropriate questions, and giving encouragement. Take pictures of various project display boards to use as examples in the future.

## April

- Prepare an announcement/press release for the school newsletter and for local newspapers about the experience and awards students won at the City Science Fair.
- Follow up on any special awards and tours that students received.
- Discuss with City Science Fair exhibitors comments about strengths and weaknesses provided by judges. Make recommendations for future science research.

## May – August

- Encourage students to continue working on their project – suggest that they find a different hypothesis to test. Inform them that collecting more of the same kind of data is an unacceptable form of project continuation.
- Reflect on the entire process of developing a science fair project – from assigning independent science investigations to the development of full-scale science fair projects. Make modifications in procedures where necessary.
- Collect resources for project ideas and other reference materials that can provide background information.

# Part Four: School Science Fairs

## Responsibilities of the School Science Fair Coordinator

Principals are to designate a school science fair coordinator to represent the school at Area science fair meetings and coordinate the school science fair.

- Instill in students an interest in research and indicate the intrinsic values that can be derived from independent investigations.
- Point out that the science fair, the science symposium, and the essay contests present opportunities for further student independent study.
- Explain that the sharing of ideas with other students and leading scientists at area, city, state, and international science fairs is the highlight of these programs.
- Assist students in selecting and developing their ideas for research projects and/or scientific papers. Where possible, make available resource information in the form of books, periodicals, and physical equipment.
- Discuss with students how to develop a project and show results of past research projects.
- Distribute a science fair handbook to those students who show promise.
- Assist students with research grant applications and *Advise-A-Student* applications when projects meet the criteria.
- Arrange periodic small-group discussions on progress of projects and provide opportunities to analyze and solve problems related to individual projects.
- Help students obtain and share equipment and supplies while determining that each project meet the safety requirements as outlined in the *2012 Science Fair Handbook*.
- Solicit the cooperation of other faculty members for facilities and services helpful in the guidance of students in their research and in the writing of their research papers.
- Determine, together with the principal, teachers, and students, the method of selecting projects for advancement to the Area science fair, using the guidelines of the City Science Fair found in the *2012 Science Fair Handbook*.
- Collaborate with the principal, parents, other teachers, and staff members to plan a local school science fair.
- Cooperate with the Area Science Fair Committee. See that students are prepared and that current student entry forms are completely filled out and submitted on time.
- Review with students the requirements for the Area fair and the City Science Fair.
- Inform high school seniors of the scholarship program.
- Encourage participation of younger students by explaining the program and the eligibility requirements.

# Suggested Calendar

## September

- Accept the role as the school science fair coordinator. Notify the Area science fair chairperson of this role.
- Schedule a science fair planning meeting. Invite the principal, librarian, art, science, mathematics, computer, and language arts teachers to the meeting.
- Describe how each of these teachers can provide guidance and support to students working on science fair projects, symposium papers, or essays.
- Form working committees such as credentials, exhibit set-up, hospitality, judging, and safety. Establish a time line for each committee to complete assigned tasks.
- Determine the date and location for the school science fair.
- Establish guidelines for the school science fair. Include topics such as (1) restricting projects to inquiry-based investigations and not allowing demonstrations; (2) safety during experimentation and safety guidelines for displaying a project at the school science fair; (3) required project components; (4) grade levels to participate in the school fair; (5) number of students/projects to participate in the school fair; (6) programs/resources available to students; (7) required endorsements; and (8) determine the awards (such as certificates, ribbons, and trophies) that will be presented to students.
- Set the dates, times, location, and agenda items for future science fair meetings.

## October

- Represent the school at the Area science fair meeting. Share information obtained from the Area science fair meeting with other teachers.
- Communicate to parents and guardians the date, location, and guidelines for the school science fair.
- Send invitations to potential judges. After judges accept the invitation, send information about the judging process and a copy of the scoring rubric.
- Seek the involvement of the community and businesses in planning the school science fair.
- Notify local newspapers about the school science fair. Prepare articles featuring the scientific research work of students who will participate.
- Become familiar with the information contained in the *2012 Science Fair Handbook* and distribute a copy to teachers working with students.
- Plan a meeting so that committee members can report on the progress of assigned tasks.
- Ask teachers to survey their students to determine which students will need to apply for endorsements.
- Work with teachers and students to complete and submit any requests for endorsements by the due date. Refer to the *Calendar of Events* in the back of this handbook.
- Encourage teachers to have students apply for the *Advise-A-Student* program and the *Mini* or *Maxi Research Grant*.
- Plan classroom science fairs. Suggest that all teachers allow peers to evaluate each other and use the same judging rubric.

## November

- Hold classroom science fairs.
- Attend the Area science fair meeting. Share information with other teachers.
- Convene a meeting of science fair committee members and finalize the procedures for the school science fair.
- Have each science fair committee report on progress. By this time the exhibits committee has secure tables and chairs; the judging committee should have confirmed that a sufficient number of judges have responded; the hospitality committee should have determined the breakfast and lunch menu, serving procedures, a student lunch schedule, and procedures for tour guides; the credentials committee should have prepared a bulletin for students attending the school fair; the safety committee should have reviewed the projects of all students attending the Area science fair.
- Have classroom teachers provide the name, grade level, category, and project title for each student selected to present at the school science fair.

- Seek permission of parents/guardians for students to participate in the school science fair. Have parents/guardians sign a *Media Consent and Release Form* so that students can be photographed, videotaped, or interviewed.
- Ask local newspapers to advertise the fair, attend the fair, take pictures, write articles about students, and list the winners.
- Invite parents and community members to attend the school science fair.

## December

- Host the school science fair. Collect data about the number of participants and the number of judges. Send this data to your Area Science Fair Chairperson and to the Area Math/Science coach.
- Collect required documents for students selected to attend the Area Science Fair.
- Sign the cover page of the *Research Summary* and the official entry form for each student advancing to the Area science fair.
- Announce the school winners in a school newsletter or prepare a press release for local newspapers.
- Submit required documents to the Area Credentials Committee so that they arrive on time.

## January

- Serve on an Area Science Fair Committee – and complete assigned tasks in a timely manner.
- Chaperone students from your school who are attending the Area science fair from your school.
- Visit with various exhibitors and take pictures.
- Inform the school of the results of the Area science fair. Send congratulatory letters to the homes of students participating in the Area science fair and especially acknowledge any student advancing to the City Science Fair.

## February

- Help students make improvements to their research projects based on the recommendations from Area science fair judges.
- Assist students with completing the *Advise-A-Student* application and/or the *Mini/Maxi Research Grant application*.

## March

- Work with the sponsoring teachers of students advancing to the City Science Fair to arrange transportation to the Museum of Science and Industry.
- Visit the City Science Fair and talk with students from various schools and in various categories.
- Take pictures of students' projects to use as examples.

## April

- Announce the results of students from your school who participated in the City Science Fair.
- Follow up on any special award or tour that students received.

## May – August

- Plan a reflection meeting with members of the school science fair committee. Make notes of areas that need to be changed next year.
- Begin planning for next year's school science fair.
- Work with the school librarian to order additional science fair resource materials.

## Part Five: Area Science Fairs

Winning projects selected at the school level advance to the Area science fair for further judging. All phases of these fairs are under the direction of the Area committees. Area science fair committees determine the locations, dates, hours, number of exhibits, judges, and supervision of Area science fairs. These fairs are scheduled during the months of December and January and must be concluded prior to the first weekday of February.

Area science fair chairpersons receive quotas governing the number of projects that they may send to the City Science Fair. The Area committees should seek qualified judges from universities, industry, or secondary schools. Judges should be given careful instructions and they should follow the guidelines listed in the *2012 Science Fair Handbook*. It is also recommended that Areas have judges use the *Chicago Public Schools Student Science Fair Judging Score Sheet*. The judging should emphasize originality and research. Demonstration projects should not ordinarily receive *Gold* and should not be sent to the City Science Fair. It is suggested that, after the judging is completed, students be given comment cards on which recommended improvements to their project and/or oral presentation are written prior to the City Science Fair.

### Responsibilities of the Area Science Fair Committee

Under the guidance of Area science fair chairpersons, approved by the AIOs, a selected group of school administrators and teachers determine the science fair program in each Area. All policies and procedures that are developed must be compatible with the City Science Fair guidelines. Students who compete at the City Science Fair must have previously participated in a Chicago public school Area science fair.

Specific duties and responsibilities of the Area science fair chairperson and committee are to:

- Use the *2012 Science Fair Handbook* to determine categories, physical requirements, safety regulations, and performance procedures.
- Enforce the ruling that all high school exhibits are individual projects.
- Enforce the ruling that elementary school projects may have no more than two students per project and encourage individual projects.
- Limit elementary school participation at the Area science fair to students in Grades 6–8. Students in Grades 4 and 5 should only exhibit if space is available. When space is limited, priority should be given to students in Grades 7 and 8 because they have an opportunity to compete at the City Science Fair.
- Limit selection for entry to the City Science Fair at the Museum of Science and Industry to students in Grades 7–12.
- Select no more than a total of two Outstanding projects from the Grade 6 participants in each Area to attend a special program to be held on Saturday during the City Science Fair. Submit a *2012 Student Science Fair Official Entry Form for Areas and City Science Fairs* and a *Consent Form and Release* for the Grade 6 Outstanding projects. Be sure to check the box, “6th Grade Recognition Event Only.” **Sixth-grade students will not exhibit their projects at the City Science Fair.**
- Obtain from the Citywide Science Fair Coordinator the Area quota of projects that may be sent to the City Science Fair at the Museum of Science and Industry.
- Cooperate with the other Area committees concerning the scheduling of science fairs. Submit an early decision of science fair dates to the Citywide Science Fair Coordinator.
- **The last date to hold an Area science fair is January 29, 2012.**

Obtain from the Citywide Science Fair Coordinator the following supplies:

- Copies of the *2012 Science Fair Handbook*
- Copies of the *2012 Organizational Handbook*
- Science fair posters
- Award certificates for each participant
- Ribbons and seals (Outstanding, Excellent and Honorable Mention)

- *Recap Sheet*
- *Science Fair Data Reporting Form*

The following forms are in the Science Fair Handbook

- *2012 Student Science Fair Official Entry Form for Area and City Science Fairs*
- *Request For Non-Human Vertebrate Animal Endorsement*
- *Request For Humans at Test Subjects Endorsement*
- *Request for Human or Vertebrate Animal Tissue Endorsement*
- *Request For Microorganism Endorsement*
- *Request For Recombinant DNA Endorsement*
- *Scholarship Application Form*

**Entry Forms.** There is only one official entry form. (Use the *2012 Student Science Fair Official Entry Form for Area and City Science Fairs*.) This form must be used for the Area and the City Science Fairs. If the project is selected to go to the City Science Fair, the official entry form must be submitted at the close of the Area science fair. A copy of the entry form should be kept at the Area Office.

**Recap Sheets.** A *Recap Sheet* will be sent to each Area science fair chairperson along with other information about procedures for submitting the names of the science fair winners from the Area. This summary sheet listing the winners of the Area science fair is to be completed in duplicate. Complete all requested information and send the original *Recap Sheet* with the official entry forms. Attach a copy of each student's *Abstract*, endorsement(s) (if applicable), and *Consent Form and Release* to each separate entry form. A copy of these forms is to be retained by the Area science fair chairperson. Mail the original entry forms and the *Recap Sheet* via the General Service Route (GSR), formerly Mail Run, or hand-deliver these to:

\*\*\*\*\***Dctdctc'F wdlgrn/Y qqf**  
 Office of Science, Elizabeth Center,  
 320 P. 'Gizabeth'Ut., "Toom 724  
 Chicago IL 80607  
 GSR #38  
 Phone: 773-553-6318  
 Email: df wdlgrn/y qqf@cps.k12.il.us

**Handbooks.** Quantities of the *2012 Science Fair Handbook* have been allocated for each school and sent directly to the ~~School Science~~ School Science Fair Coordinator. The 2012 Organizational Handbook will be available on line only at [www.cssf.org](http://www.cssf.org) as printing costs have made producing this book prohibitive. The *Calendar of Events* for the entire year is included in both handbooks. Each student selected to participate in the City Science Fair should be given a *Science Fair Handbook*. Students selected to participate in the Illinois Junior Academy of Science (IJAS) State Science Fair and the International Science and Engineering Fair (ISEF) will receive those respective handbooks upon selection.

**Posters.** An attractive poster has been designed for display in schools, classrooms, study halls, libraries, and science laboratories. The graphics appearing on the poster are intended to encourage students who are interested in science and mathematics to enter their research work in one or more of the science fair programs.

**Award Certificates, Ribbons, Seals.** An ample quantity of these awards is made available so that every science fair participant at the Area science fair is awarded one of the following ribbon designations: Outstanding, Excellent and Honorable Mention. The number of Outstanding ribbons supplied cannot exceed the Area quota of projects allowed to advance to the City Science Fair.

**Humans as Test Subjects and Non-Human Vertebrate Animal Endorsement Requests.** Projects that utilize humans or vertebrate animals must complete the *Request for Humans as Test Subjects Endorsement* or *Request for Non-Human Vertebrate Animal Endorsement*. These forms must be completed according to the directives contained in the *2012 Science Fair Handbook* and must follow all rules. The Scientific Review Committee will approve or disapprove all requests for permission to participate in human or vertebrate animal research. If a *Humans as Test Subjects* or *Non-Human Vertebrate Animal Endorsement* is issued, the original must accompany the official entry form.

copy must be included in the student's research paper.

**Human or Vertebrate Animal Tissue Endorsement Requests.** All projects involving human or vertebrate animal tissue (all body fluids, including blood, saliva, and urine, as well as hair, bone, and teeth) require a *Human or Vertebrate Animal Tissue Endorsement*. The student must obtain the endorsement from the Scientific Review Committee before beginning the experiment. See the *2012 Science Fair Handbook* for examples of sources of vertebrate animal tissue and proper handling. No fresh or preserved human or vertebrate animal tissue may be displayed. However, sterilized hair and teeth may be displayed if sealed.

**Microorganism Endorsement Requests.** Projects which utilize microorganisms not on the approved list must include a *Microorganism Endorsement*. A form to request this endorsement is found in the *2012 Science Fair Handbook*. It should be completed according to the directives contain in the handbook, and must adhere to all safety rules. This endorsement must accompany the official entry form. The student will have to submit documentation that the microorganism is rated as a Biosafety Level 1 organism. All research involving potentially hazardous biological agents must be done in an appropriate school laboratory with a trained supervisor. Only research on bread mold and yeast may be done in a student's home.

**Recombinant DNA Endorsement Requests.** All research involving recombinant DNA techniques must meet the requirements of the National Institute of Health guidelines for research involving recombinant DNA molecules. Such studies must only be conducted in a regulated research laboratory under the guidance of a biomedical scientist who is approved to conduct such studies by an appropriately constituted and registered Biosafety Committee and who is approved by the Scientific Review Committee of CPS Student Science Fair, Inc. A form to request this endorsement is found in the *2012 Science Fair Handbook*. This endorsement must accompany the official entry form.

All requests for endorsements are to be submitted by **October 28, 2011**.

**Laser Registration Form.** All lasers at the school, area, and City Science Fair levels must be registered. Obtain a registration form from:

\*\*\*\*\***Dctdet c'F wdlgrm/Y qqf**  
Office of Science, Elizabeth Center,  
320'P0Glizabeth Ut., "Toom"704  
Chicago "K 80607  
GSR #38  
Phone: 773-553-6318  
Email: df wdlgrm/y qqf @cps.k12.il.us

**Selection of Exhibits for the City Science Fair.** Projects chosen at the Area science fair should be selected from the projects that were rated as Outstanding. Only projects that exhibit independent research should be sent to the City Science Fair. The projects should involve a controlled experiment and not simply be a demonstration type of display.

Each Area fair is encouraged to send the best representative exhibitors to the City Science Fair. The quota of projects received from the Citywide Science Fair Coordinator is the only limiting factor. No consideration should be given to the distribution of the exhibitors among the categories. In all cases, the best projects should be selected regardless of the category, grade, or school of the students.

If an Area science fair does not use its entire quota, or if an Area science fair needs more than the assigned quota because of the number of Outstanding projects, the Area science fair chairperson should contact the Citywide Science Fair Coordinator.

# Suggested Calendar

## August

- Approval of an Area science fair chairperson by the AIO.
- Submit name of the appointed Area science fair chairperson to the Citywide Science Fair Coordinator.
- Select a date for the first meeting of science fair coordinators from each school.
- Announce at a principals' meeting that an Area science fair chairperson has been appointed and that each principal is to identify a school science fair coordinator.
- Provide the date, time, and location for the first Area science fair meeting.

## September

- Send a notice to each school science fair coordinator indicating the date, time, and location for the first Area science fair meeting.
- Use the first Area science fair meeting to discuss the connection among the Illinois Learning Goals in English/Language Arts, Mathematics, Science and Fine Arts and the development of a science fair project, a symposium paper or an essay. Describe the connection between science fair activities and the Chicago Reading Initiative.
- Have each school science fair coordinator select an Area science fair committee on which to serve.

## Description of Area Committees

**Credentials Committee** This committee receives and reviews the required documents for entry in the Area science fair (*2012 Student Science Fair Official Entry Form for Area and City Science Fairs, Abstract, Safety Sheet, Consent Form and Release*, and any applicable endorsement(s). Each project should be screened to determine if an endorsement was required. This committee prepares and submits the *Recap Sheet* listing the winners of the Area science fair and completes the *Area Science Fair Data Reporting Form*.

**Exhibits Committee** This committee prepares the exhibit area for students' display boards. Tables and chairs may need to be borrowed or rented for the Area science fair. Each project needs to be numbered or identified so that science fair judges will easily locate assigned projects. Upon conclusion of the fair, this committee returns the tables and chairs and cleans the exhibit area.

**Hospitality Committee** This committee arranges for refreshments at each Area science fair meeting and for breakfast and lunch of the judges, teachers, and students attending the Area science fair. This committee decides on decorations for the Area science fair and establishes procedures for tour guides during the fair.

**Judging Committee** This committee secures a sufficient number of judges for the Area science fair; sends letters inviting judges and receives confirmations from judges who can participate. This committee is also responsible for providing judges with an orientation and procedures for evaluating the exhibitors. Committee members assign projects to judges, check the judging scoring rubric, confirm the score, compute results and prepare a list of the winning projects.

**Safety Committee** This committee reviews the *Safety Sheet* submitted by each student. As each student sets up his/her project, a member of this committee inspects the project for compliance with safety guidelines for display. If possible, and violation is corrected or the committee may decide to disqualify the project.

- Establish a timeline for completing various tasks in preparation for the Area science fair. Determine the date, time, and location of the Area science fair.
- Assign tasks to each committee. Allow committee members time to meet and discuss assigned tasks. Have each committee select a leader or spokesperson to give a progress report. Set dates for future Area science fair meetings. Ask all members to give the names of potential Area science fair judges to the judging committee.
- Create an Excel file listing the name of each school science fair coordinator, the name of the school, and the GSR number. Submit this list to the City Science Fair Coordinator. (This list will be used to mail the handbooks and poster to each school.)

## October

- Schedule an Area science fair committee meeting. Discuss the new or changes in rules and regulations provided in the *2012 Science Fair Handbook*. Review safety guidelines for experimentation and safety guidelines for display. Point out that some projects may require an endorsement. Review the requirements for various kinds of endorsements (Humans as Test Subjects, Non-Human Vertebrate Animal, Human or Vertebrate Animal Tissue, Microorganism, and Recombinant DNA). Have each committee spokesperson give a progress report.
- Summarize the progress reports from each committee. Provide information to the school science fair coordinators about the established procedures for the Area science fair. Send a copy of the established Area science fair procedures to the principal of school.
- Assist the judging committee with composing a letter to potential judges. Have the letter signed by the AIO. Mail the letters to potential science fair judges.

## November

- Establish an Internal Account for the Area science fair operating funds.
- Provide the City Science Fair Coordinator with the account name and location to send the check for the allocated Area science fair operating funds.
- Create a budget for conducting the Area science fair.
- Order certificates, ribbons (Outstanding, Excellent and Honorable Mention) and seals from the City Science Fair Coordinator. The number of Outstanding ribbons cannot exceed the quota of projects that can be sent the City Science Fair. (The quota of projects that can be sent to the City Science Fair will be provided to each Area science fair chairperson.)
- Hold an Area science fair committee meeting. Have each committee give a progress report. Determine the number of projects that each area school can send to the Area science fair. Prepare an Area science fair bulletin describing final procedures for participation at the Area science fair. Indicate the due date for required documents to be sent to the Area credentials committee. Distribute the bulletin to each Area school.

## December

- Hold an Area science fair meeting on or after the due date for submitting required documentation for each student participating in the Area science fair. Provide time for Area science fair committee members to meet and work. Have the credentials committee point out any problems with required documentation. Ask the credentials committee to confirm the number of science fair entries from each school and to work with any science fair school coordinator who has problems with required documentation. Make sure that all projects have any appropriate endorsement(s).
- Finalize the plans for the Area science fair. Have each committee give a progress report.

## January

- Host the Area science fair. Collect data about the number of Area science fair participants and the number of judges.
- Distribute certificates with ribbons and seals to student participants.
- Collect and review documents of projects selected to participate at the City Science Fair.
- Sign the *2012 Student Science Fair Official Entry Form for Area and City Science Fairs*.

## February

- Submit required documents to the City Science Fair Coordinator. See the *Calendar of Events* for the due date.
- Announce the Area science fair winners in an Area newsletter and/or prepare a press release for local newspapers.
- Prepare a list of the Area science fair committee members for publication in the *City Science Fair Program Book*.

## March

- Attend the *Opening Ceremony* and *Recognition Luncheon* for chairpersons, judges, and corporate sponsors as posted on the *Calendar of Events*.
- Visit the City Science Fair and talk with students from various schools and in various categories.

## **April – June**

- Plan a reflection meeting with members of the Area science fair committee. Make note of suggested changes for next year.
- Begin planning for your 2013 Area science fair.

# Part Six: Officers and Chairperson

## City Science Fair Officers

### Executive Director

**Pamela Sherley**  
Robeson High School  
GSR# 45  
Phone: 535-3133  
Email: [pdsherley@cps.edu](mailto:pdsherley@cps.edu)

### Chairperson

**Linda Carter**  
CPS, Retired  
Email: [lacarter2010@aol.com](mailto:lacarter2010@aol.com)

### Chairperson-Elect

**Luba Johnson**  
CPS, Retired  
Phone: 773-925-2204  
Email: [lubaj@hotmail.com](mailto:lubaj@hotmail.com)

### Past Chairperson

**Edward Scanlon**  
Morgan Park High School  
GSR #49  
Phone: 535-2537  
Email: [rateater@netscape.net](mailto:rateater@netscape.net)

### Secretary

**Pamela Barry**  
Museum of Science and Industry  
Email: [Pam.Barry@msichicago.org](mailto:Pam.Barry@msichicago.org)

### Treasurer

**Anne Marie Sherry**  
W. Young High School  
GSR #38  
Phone: 534-7501  
Email: [amsherry@lycos.com](mailto:amsherry@lycos.com)

## Operating Committee Chairpersons

**Advise-A-Student Program**  
TBA

### Alumni Association

**RyAnn Nelson**  
Lindblom Math & Science  
Academy  
GSR# 43  
Phone: 773-535-9300  
Email: [rsnelson@cps.edu](mailto:rsnelson@cps.edu)

### Archival Records

**Melanie Wojtulewicz**  
CPS, Retired  
Email: [melwojo@aol.co](mailto:melwojo@aol.co)

### Arrangements

**Ethelene Hare**  
CPS, Retired  
Email:  
[c2h4kearney@worldnet.att.net](mailto:c2h4kearney@worldnet.att.net)

### Communications and Credentials

**Barbara Dubielak-Wood**  
Office of Science,  
Elizabeth Center,  
320 N. Elizabeth St.,  
Room 504  
Chicago IL 60607  
GSR #38  
Phone: 773-553-6318  
Email: [bdubielak-wood@cps.k12.il.us](mailto:bdubielak-wood@cps.k12.il.us)

### Computer Programs

**Dennis Hart**  
Omicron Technologies  
Phone: 773-508-9292

### Data Entry

**Yolanda Del Rio**  
CPS, Retired  
Phone: 708-599-3421  
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### **Digital Imaging**

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### **Exhibits**

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### **Illinois Junior Academy of Science**

#### **Anne Marie Sherry**

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### **International Science and Engineering Fair**

#### **Pamela Moy**

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### **Judging**

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### **Nominating**

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### **Publications**

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### **Research Grants**

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### **Safety**

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### **Scholarship**

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### **Scientific Review**

#### **Nancy Toomey**

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*Do not fax or call the school – only send mail.*

### **Special Awards and Tours**

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### **Symposium and Essay Contests**

#### **Nina Hike-Teague**

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# **Calendar of Events:**

Please visit [www.cssf.org](http://www.cssf.org) for the most current calendar.